

530847

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/033008 A1

(51) International Patent Classification⁷: **A61M 5/32, 5/50**

(21) International Application Number:
PCT/US2003/031249

(22) International Filing Date: 2 October 2003 (02.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/418,051 11 October 2002 (11.10.2002) US

(71) Applicant (for all designated States except US): **BECTON DICKINSON AND COMPANY** [US/US]; 1 Becton Drive, Franklin Lakes, NJ 07417-1880 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COELHO, Eduardo, Pinto** [BR/BR]; Rua Padre Anchieta, 1123/701, Champagnat, Curitiba-Parana (BR). **DA SILVA, Delmar, Francisco, Goncalves** [BR/BR]; Rua Jacob Macanhã, 1606, Jardim Guairca, Pinhais-Parana (BR). **SHARIFI-MEHR, Amir, A.** [US/US]; 12 Elm Street, Bloomington, NJ 07403 (US). **FLEISCHER, Gene** [US/US]; 51

Cranford Drive, New City, NY 10956 (US). **CIPOLETTI, Robert, K.** [US/US]; 9 Jocelyn Place, Pompton Plains, NJ 07444 (US). **ODELL, Robert, B.** [US/US]; 357 Pulis Avenue, Franklin Lakes, NJ 07417 (US).

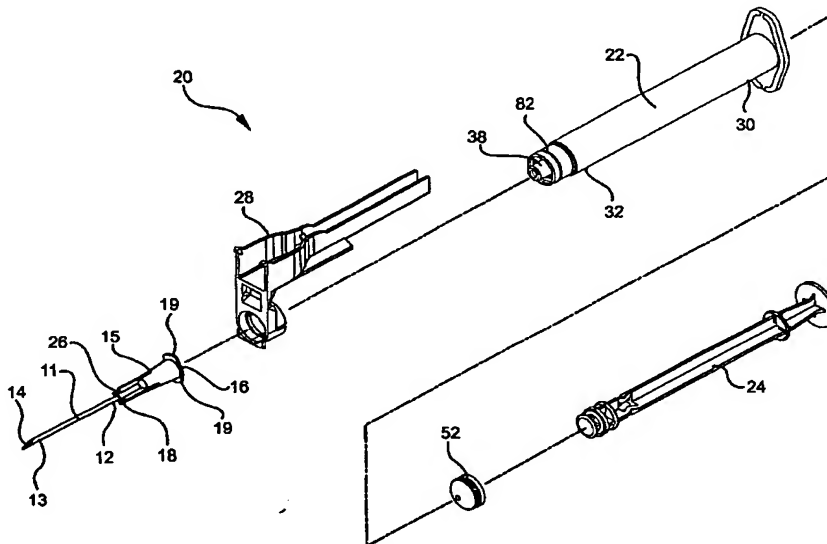
(74) Agent: **VOELLMICKE, John, L.**; Becton, Dickinson and Company, 1 Becton Drive, Franklin Lakes, NJ 07417-1880 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SINGLE USE SYRINGE HAVING SAFETY SHIELD



(57) Abstract: A single use syringe assembly includes a barrel having a chamber for retaining fluid, an open proximal end and a distal end including an elongate tip extending distally therefrom having a passageway therethrough in fluid communication with the chamber. A needle cannula having a lumen therethrough is connected to the elongate tip so that the lumen is in fluid communication with the passageway. An elongate needle shield having a longitudinal opening therein is hingedly connected to the barrel. A needle shield is capable of pivoting from an open position or a closed needle protecting position. The plunger including an elongate body portion and a stopper is slidably positioned in fluid-tight engagement with the inside surface of the barrel. Structure is provided for locking the plunger in the barrel by applying distally directed force to the plunger after fluid has been delivered from the chamber.

WO 2004/033008 A1